

**REMARKS**

Claims 1-3 and 5-10 are pending in this application. By this Amendment, claims 1-3 are amended to correct typographical errors. No new matter is added.

**I. Rejection under 35 U.S.C. §103**

The Office Action rejects claims 1-3 and 5-10 under 35 U.S.C. §103(a) over U.S. Patent No. 6,242,499 to Gruning et al. (Gruning). Applicants respectfully traverse the rejection.

By this Amendment, claim 1 recites, *inter alia*, "A cosmetic comprising a hydroxyl compound obtained by reaction of a di- or a higher-valent alcohol with a monovalent carboxylic acid and dimer acid... and that a molar ratio among diglycerin, isostearic acid, and dimer acid is 1.0 : 1.4 to 1.6 : 0.5 to 0.8...." Applicants respectfully assert that Gruning would not have rendered obvious at least the above features of claim 1.

The Office Action alleges that Gruning discloses a composition comprising polyglycerol, isostearic acid, and dimer acid. The Office Action acknowledges that Gruning fails to disclose the molar ratios between the components. However, the Office Action further alleges that it would have been obvious to vary the molar ratios of the components disclosed in Gruning. Applicants respectfully assert that it would not have been obvious to one of ordinary skill in the art to have modified the molar ratios of the components disclosed in Gruning to be within the claimed ratios and that the molar ratio recited in claim 1 achieves unexpected results over the composition disclosed in Gruning. Thus, Applicants respectfully assert that the cosmetic composition of claim 1 would not have been rendered obvious by Gruning.

The molar ratio of polyglycerol : isostearic acid : dimer acid in Gruning can be established as 1.0 : 2.2 : 0.52, through stoichiometry. For example, Gruning discloses using 100 g of technical-grade polyglycerol, with a hydroxyl number of 1180. See Gruning, col. 4,

lines 47-50. This hydroxyl number is approximately that of triglycerin, which has a hydroxyl number of 1170 and a molecular weight of 240 g/mol. Accordingly, the molecular weight of the technical-grade polyglycerol is approximately 240 g/mol. Then, 100 g of technical-grade polyglycerol corresponds to 0.417 mols. Gruning further discloses using 121 g of dimer acid (Pripol 1025 from Unichema, comprising 5% monocarboxylic acid, 75% of difunctional carboxylic acid, and 20% of trifunctional carboxylic acid). See Gruning, col. 4, lines 54-58. The molecular weight of Pripol 1025 is approximately that of Pripol 1009, which was used in the Examples in the present specification, and has a molecular weight of 561 g/mol. See specification, [0033]. Accordingly, 121 g of Pripol 1025 corresponds to about 0.216 mols. Gruning also discloses using 264 g of isostearic acid, which has a molecular weight of 284 g/mol, thus Gruning uses 0.93 mols. See Gruning, col. 4, lines 46-49. Accordingly, the molar ratio of polyglycerol : isostearic acid : dimer acid disclosed in Gruning is 0.417 : 0.93 : 0.216 or 1.0 : 2.2 : 0.52.

The ratio of isostearic acid disclosed in Gruning is well above the upper limit of isostearic acid recited in claim 1, and the ratio of dimer acid is below the lower limit recited in claim 2. Therefore, the composition disclosed in Gruning is an oligomer with a low degree of polymerization. Deviation from the ratio of isostearic acid recited in the present claims leads to undesired results. For example, if isostearic acid is not within the claimed ratio, separation of diglycerin occurs due to the existence of unreacted diglycerin, and undesired by-products such as diester and triester are formed. See specification, [0027]. Further, deviation from the claimed ratio of dimer acid can cause the degree of polymerization of the hydroxyl compound to be insufficient and results in an oligomer with low viscosity. See specification, [0027].

As shown by the hydroxyl compounds obtained from Preparation Examples 1-7 of the present specification, the molar ratios of the components as recited in claim 1 leads to pale

yellow and viscous hydroxyl compounds having the claimed viscosity, molecular weight, and hydroxyl values. See specification, Table 1, page 20. In contrast, the compounds obtained in Comparative Preparation Examples 1-9, which use molar ratios outside of the claimed ratios, do not have the claimed viscosity, molecular weight, and hydroxyl values. See specification, Table 1, page 20.

Additionally, the use of triglycerin, as disclosed in Gruning, is shown in Comparative Preparation Example 1. The components used in Comparative Preparation Example 1 have similar molar ratios (1.0 : 2.0 : 0.2) as those disclosed in Gruning, and result in a product having a hydroxyl value outside of the claimed range. See specification, Table 1, page 20.

In Comparative Preparation Example 6, the molar ratio of isostearic acid to dimer acid is 1.5 : 0.4, which is outside of the claimed molar ratio. Gruning discloses a similar isostearic acid to dimer acid molar ratio of 2.2 : 0.52, as explained above. Comparative Preparation Example 6 results in a compound having a lower viscosity, a lower molecular weight, and a higher hydroxyl value than those recited in the claims. See specification, Table 1, page 20.

In view of the above data, Applicants respectfully assert that the molar ratios recited in claim 1 achieve improved and unexpected results relative to the molar ratios disclosed in Gruning. Further, the Office Action provides no reason or rationale for one of ordinary skill in the art to have modified the ratios disclosed in Gruning to be within the claimed ratios. Thus, Applicants respectfully assert that the claimed composition would not have been rendered obvious by Gruning.

Claim 1 would not have been rendered obvious by Gruning. Claims 2-3 and 5-10 depend from claim 1 and, thus, also would not have been rendered obvious by Gruning. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

**II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Petition for Extension of Time

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